PCB Site Characterization
Williams Natural Gas Facility
Buffalo, Oklahoma

April 6, 1995

Prepared for:

Williams Natural Gas
Tulsa, Oklahoma

Project Number 11885

182477

BURLINGTON ENVIRONMENTAL INC.
A Philip Environmental Company
3010 Greens Road
Houston, Texas 77032

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Report on
PCB Site Characterization
at
Williams Natural Gas - Buffalo, Oklahoma

SUMMARY

Burlington Environmental Inc. (Burlington) conducted a site characterization at the Williams Natural Gas facility in Buffalo, Oklahoma to evaluate the extent of potential polychlorinated biphenyl (PCB) contamination. Burlington collected wipe samples from the concrete floor in the compressor/auxiliary building, from the walls of the compressor basement, from the pipechase and associated piping, and from the header to the air receivers. A total of 48 samples were submitted to ETS Analytical Services, Inc. (ETS) for PCB analysis.

Analytical results indicated that one sample (BUF-COM-WP22) from the floor of the compressor/auxiliary building had a PCB level of 36 micrograms per 100 square centimeters ($\mu g/100\ cm^2$). All the wipe samples collected from the walls of the compressor basement were below the detection limit of 1 $\mu g/100\ cm^2$. Elevated levels of PCBs were reported for the wipe samples collected from the pipechase and the three-inch header to the air receivers. For the areas sampled, PCB contamination (greater than 10 $\mu g/100\ cm^2$) appears to be limited to the compressor/auxiliary building in the vicinity of wipe sample area BUF-COM-WP22, to the header of the air receivers, and to the pipechase.

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INTRODUCTION

At the request of Williams Natural Gas (WNG), Burlington Environmental Inc. (Burlington) collected wipe samples from the sample areas shown on Figures 1,2 and 3 to characterize the floors, walls, and pipe surfaces for potential polychlorinated biphenyl (PCB) contamination from past operations. Analyses of the samples collected for PCBs were performed by ETS Analytical Services, Inc. (ETS) in Roanoke, Virginia.

Samples submitted to the laboratory were analyzed for total PCBs in accordance with United States Environmental Protection Agency (USEPA) methods. Sampling activities were conducted on August 25, 1994.

BURLINGTON'S PCB SAMPLING METHOD

For characterization of surfaces, wipe samples are taken according to USEPA protocols: A gauze pad is moistened with Hexane and applied to a 100 cm^2 template on the surface. The wipe samples are placed in 4-ounce glass sampling containers, then sealed with Teflon®-lined lids. All samples collected were placed on ice in a cooler to maintain the required 4°C and shipped to the laboratory for analysis. The wipe samples collected were submitted to ETS for chemical analysis.

CONCRETE FLOOR, WALL, AND PIPE SURFACE SAMPLING

Burlington personnel collected wipe samples from the concrete surfaces in the pipechase, walls of the compressor basement, and the compressor/auxiliary building to evaluate if the floors or walls had been impacted by PCBs during past operations. In addition, Burlington collected wipe samples from piping located in the pipechase and at the air receivers. The locations of the wipe samples were determined in accordance with USEPA guidelines for grid sampling. The wipe sample locations are shown on Figures 1 through 3. Burlington submitted 48 wipe samples:

- 30 samples from the concrete floor of the compressor/auxiliary building (Figure 1)
- 6 samples from the walls of the compressor basement (Figure 2)
- 5 samples from the pipechase (Figure 3)
- 2 samples from the piping located in the pipechase (Figure 3)
- 1 sample from the header to the air receivers
- 3 duplicate wipe samples and 1 field blank for Quality Assurance/Quality Control (QA/QC)

BURLINGTON'S QUALITY ASSURANCE/QUALITY CONTROL

Burlington followed the sampling protocols and procedures as outlined in USEPA Test Methods for Evaluating Solid Waste (SW-846). QA/QC procedures were maintained so that the wipe samples collected for laboratory analyses provide accurate and reliable information. QA/QC procedures for the project include the use of disposable latex gloves when collecting or handling each sample to prevent cross contamination between samples.

Burlington personnel collected duplicate wipe samples and one field blank for QA/QC. In addition, signed chain of custody documentation for all samples submitted to the laboratory for analysis were maintained by Burlington. Sample logs and chain of custody documentation are included in Appendix A.

DISCUSSION OF PCB RESULTS

The analytical results for the surface wipe samples submitted to ETS are summarized in Tables 1 and 2. The wipe samples, with the PCB levels greater than 10 µg/100 cm^2, are highlighted in Tables 1 and 2. Analytical results provided by ETS are included in Appendix B.

For the samples collected from the compressor/auxiliary building, the PCB concentrations ranged from below the detection limit to 36 µg/100 cm^2. In the compressor/auxiliary building, PCB contamination appears to be limited to an area near sample location BUF-COM-WP22 (See Figure 1).

Elevated levels of PCBs were reported for all the concrete surface wipe samples collected from the pipechase. The concentrations ranged from 73 µg/100 cm^2 to 4300 µg/100 cm^2. The samples collected from the drip drain (BUF-PC-DRAIN) and the two-inch pipe (BUF-PC-WP4) in the pipechase also had PCB concentrations above 10 µg/100 cm^2. All of the concrete wall samples collected from the compressor basement were below the detection limit of 1 µg/100 cm^2. The PCB level for the three-inch header of the air receivers (BUF-ARH-WP1) was 21 µg/100 cm^2. This header is located in the area designated as abandoned air receiver area C. Based upon the data collected and evaluated, PCB contamination appears to be limited to the pipechase (See Figure 3) and the three-inch header of the air receivers located on the west side of the building.

BURLINGTON'S RECOMMENDATIONS

Based upon the detection of PCBs in an area of the compressor/auxiliary building, in the pipechase, and on the surface of the three-inch header to the air receivers, Burlington recommends that the areas be cleaned using an USEPA accepted process. Using an USEPA accepted process for cleaning surfaces would allow for deregulation of the area and continued

use. If the area is not cleaned, the potential exists for continued contamination of other media (soil or groundwater) and other surface areas.

FIGURES

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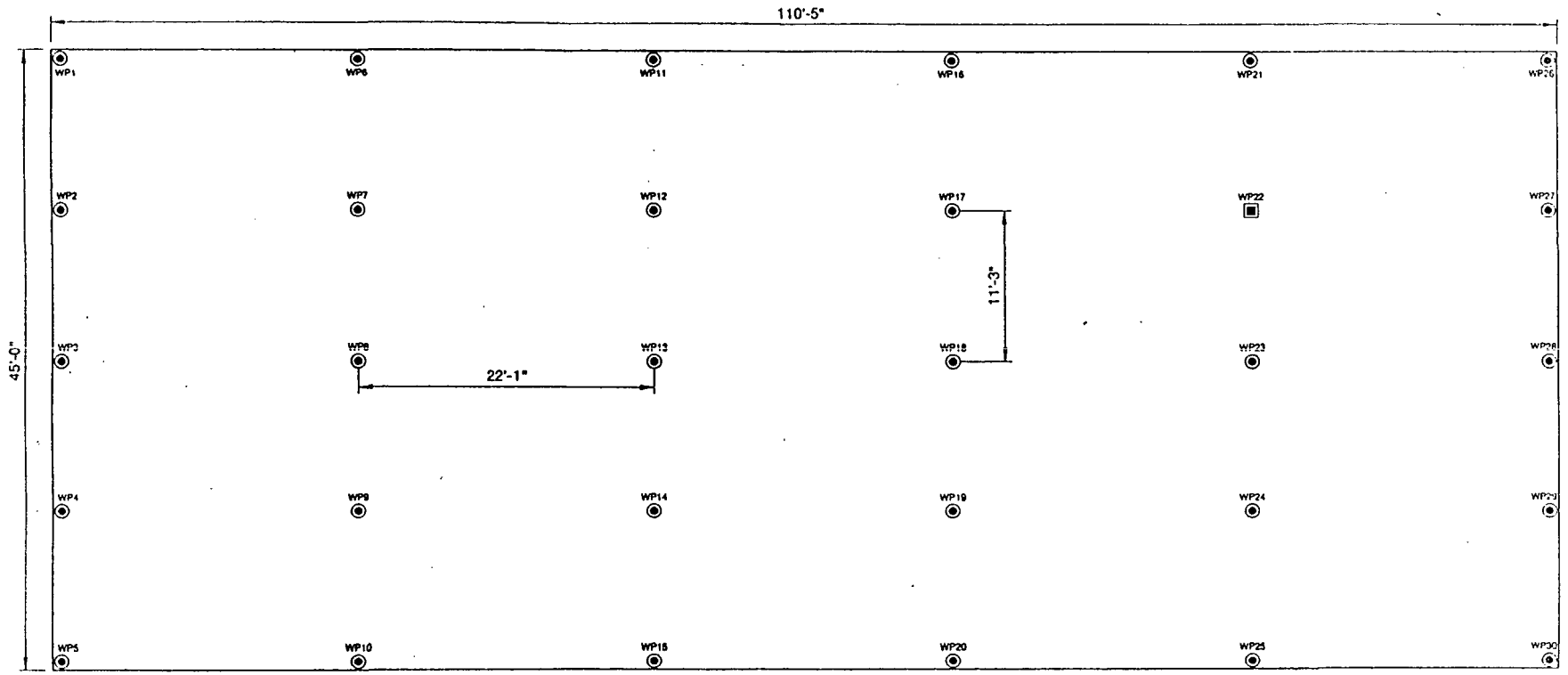

LEGEND
BUF-COM-WP1-WPW30
◉ SAMPLE POINT
▣ ≥ 10 ug

NOT TO SCALE

Burlington Environmental Inc.	
COMPRESSOR/AUXILIARY BUILDING	
Williams Natural Gas Buffalo, OK. 11885	FIGURE 1

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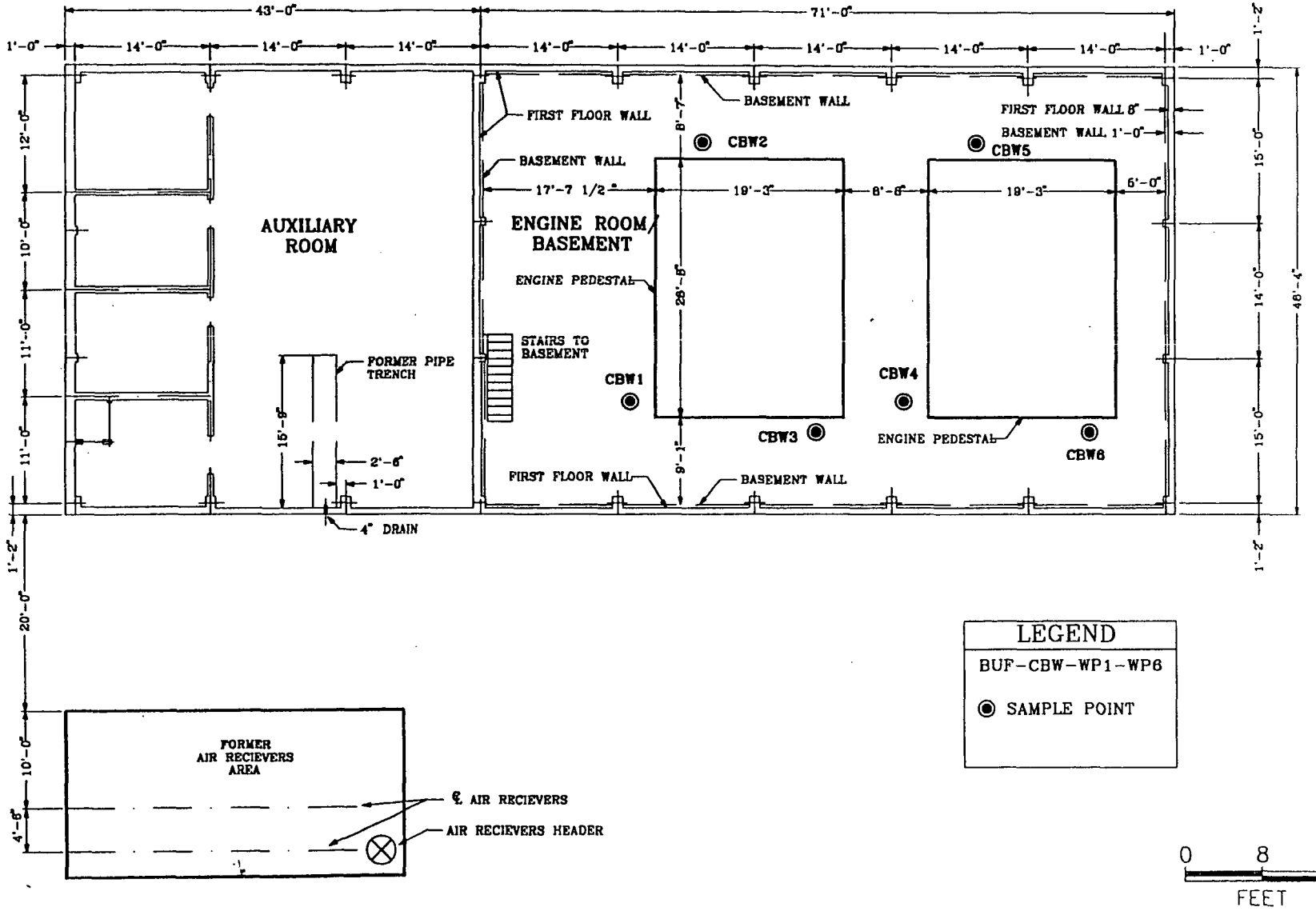

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BURLINGTON ENVIRONMENTAL

TITLE:
WILLIAMS NATURAL GAS
Buffalo, OK
Walls of Compressor Building-Samples

DWN: KMO	DES.:	PROJECT NO.: 11885	
CHKD:	APPD:		
DATE: 3/1/95	REV.:	FIGURE NO.: 2	

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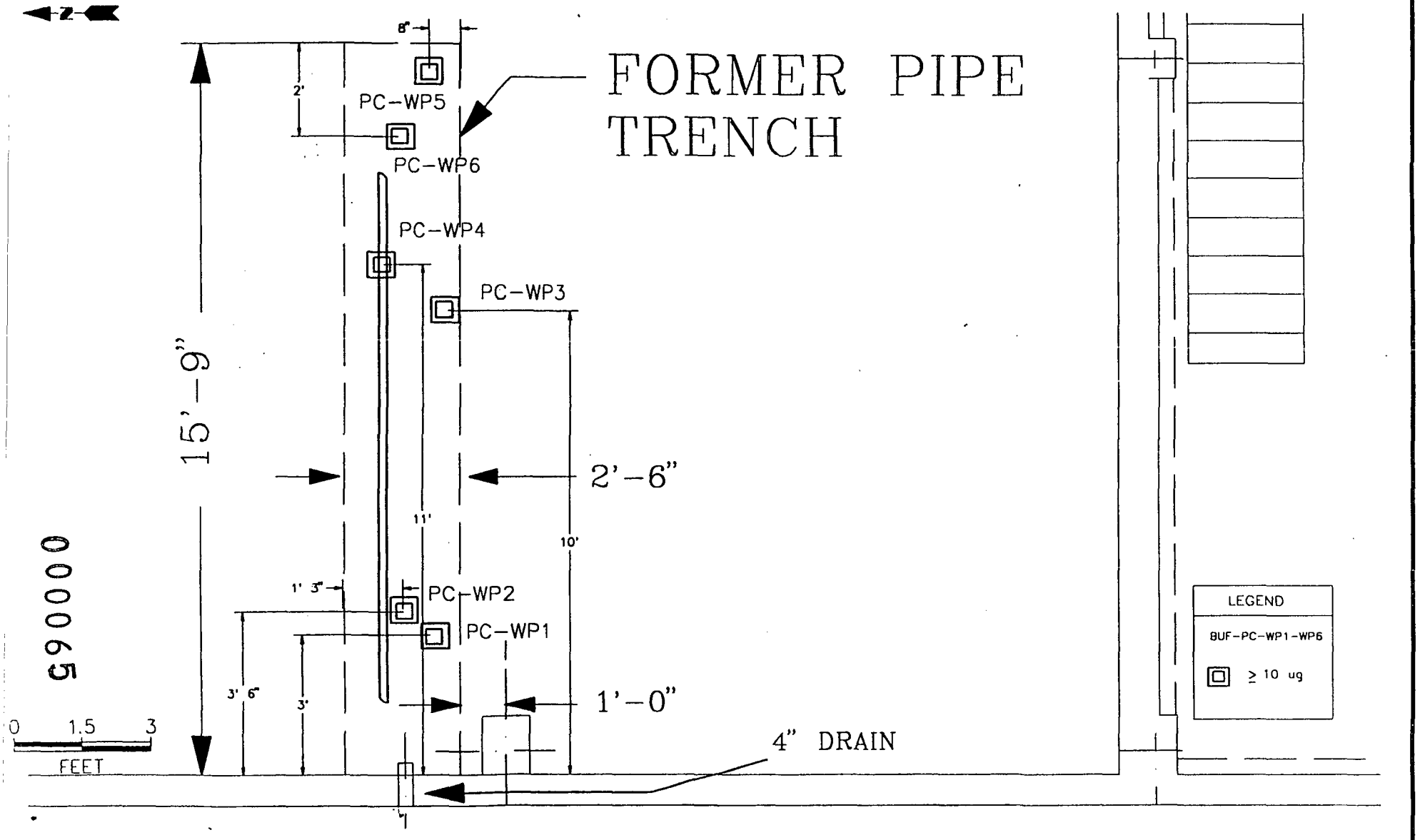

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BURLINGTON ENVIRONMENTAL

TITLE:
WILLIAMS NATURAL GAS
Buffalo, OK
Auxiliary Pipechase

DWN: KMO	DES.:	PROJECT NO.: 11885
CHKD:	APPD:	
DATE: 3/1/95	REV.:	FIGURE NO.: 3

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TABLES

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Table 1
PCB Analytical Results for Concrete Wipe Samples
Compressor/Auxiliary Building
August 25, 1994
(Figure 1)

Sample Identification	PCB Level (µg/100 cm^2)	Comments
BUF-COM-WP1	ND(1.0)	Wipe Sample
BUF-COM-WP1D	ND(1.0)	Duplicate Wipe Sample
BUF-COM-WP2	ND(1.0)	Wipe Sample
BUF-COM-WP3	ND(1.0)	Wipe Sample
BUF-COM-WP4	ND(1.0)	Wipe Sample
BUF-COM-WP5	ND(1.0)	Wipe Sample
BUF-COM-WP6	ND(1.0)	Wipe Sample
BUF-COM-WP7	1.8	Wipe Sample
BUF-COM-WP8	8.0	Wipe Sample
BUF-COM-WP9	ND(1.0)	Wipe Sample
BUF-COM-WP10	ND(1.0)	Wipe Sample
BUF-COM-WP11	ND(1.0)	Wipe Sample
BUF-COM-WP12	5.8	Wipe Sample
BUF-COM-WP13	ND(1.0)	Wipe Sample
BUF-COM-WP13D	ND(1.0)	Duplicate Wipe Sample
BUF-COM-WP14	ND(1.0)	Wipe Sample
BUF-COM-WP15	ND(1.0)	Wipe Sample
BUF-COM-WP16	ND(1.0)	Wipe Sample
BUF-COM-WP17	2.3	Wipe Sample
BUF-COM-WP18	ND(1.0)	Wipe Sample
BUF-COM-WP19	1.4	Wipe Sample
BUF-COM-WP20	ND(1.0)	Wipe Sample
BUF-COM-WP21	1.4	Wipe Sample
BUF-COM-WP22	**36**	Wipe Sample
BUF-COM-WP23	ND(1.0)	Wipe Sample
BUF-COM-WP23D	ND(1.0)	Duplicate Wipe Sample
BUF-COM-WP24	ND(1.0)	Wipe Sample
BUF-COM-WP25	ND(1.0)	Wipe Sample
BUF-BLANK	ND(1.0)	Field Blank
BUF-COM-WP26	ND(1.0)	Wipe Sample
BUF-COM-WP27	1.8	Wipe Sample
BUF-COM-WP28	ND(1.0)	Wipe Sample
BUF-COM-WP29	ND(1.0)	Wipe Sample
BUF-COM-WP30	ND(1.0)	Wipe Sample

µg/100 cm^2 = micrograms per 100 square centimeters
ND = Not Detected; Detection limit indicated in parentheses.

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Table 2
PCB Analytical Results for Surface Wipe Samples
Pipechase and Walls of the Compressor Basement
August 25, 1994
(Figures 2 and 3)

Sample Identification	PCB Level (µg/100 cm^2)	Comments
BUF-PC-WP1	**73**	Pipechase, Wipe Sample
BUF-PC-WP2	**4300**	Pipechase, Wipe Sample
BUF-PC-WP3	**900**	Pipechase, Wipe Sample
BUF-PC-WP4	**2900**	2-inch Pipe in Pipechase, Wipe Sample
BUF-PC-WP5	**650**	Pipechase, Wipe Sample
BUF-PC-WP6	**110**	Pipechase, Wipe Sample
BUF-PC-DRAIN	**1100**	Drip Drain in Pipechase, Wipe Sample
BUF-CBW-WP1	ND(1.0)	Compressor Basement Wall, Wipe Sample*
BUF-CBW-WP2	ND(1.0)	Compressor Basement Wall, Wipe Sample
BUF-CBW-WP3	ND(1.0)	Compressor Basement Wall, Wipe Sample
BUF-CBW-WP4	ND(1.0)	Compressor Basement Wall, Wipe Sample
BUF-CBW-WP5	ND(1.0)	Compressor Basement Wall, Wipe Sample
BUF-CBW-WP6	1.1	Compressor Basement Wall, Wipe Sample
BUF-ARH-WP1	**21**	3-inch Header to the Air Receivers, West Side, Wipe Sample

µg/100 cm^2 = micrograms per 100 square centimeters
ND = Not Detected; Detection limit indicated in parentheses.
* Walls of the Compressor Basement Wipe Samples (BUF-CBW-WP1 through BUF-CBW-WP6) collected approximately two feet below steel grating.

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APPENDIX A

Sample Logs
Chain of Custody Documentation

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Burlington Environmental Mobile Decontamination Units
SAMPLE LOG

Client: WILLIAMS NATURAL GAS
Station: BUFFALOE, OK.
Supervisor: ROBERT YARNUM

Date Sampled	Time	Unique Identification	Sample Result	Remarks
8-25-94		BUF-COM-WP1		COMPRESSOR BUILDING
		BUF-COM-WP2		GRID.
		BUF-COM-WP3		
		BUF-COM-WP4		
		BUF-COM-WP5		
		BUF-COM-WP6		
		BUF-COM-WP7		
		BUF-COM-WP8		
		BUF-COM-WP9		
		BUF-COM-WP10		
		BUF-COM-WP11		
		BUF-COM-WP12		
		BUF-COM-WP13		
		BUF-COM-WP14		
		BUF-COM-WP15		
		BUF-COM-WP16		
		BUF-COM-WP17		
		BUF-COM-WP18		
		BUF-COM-WP19		
		BUF-COM-WP20		
		BUF-COM-WP21		
		BUF-COM-WP22		
		BUF-COM-WP23		
		BUF-COM-WP24		
		BUF-COM-WP25		
		BUF-COM-WP1D		
		BUF-COM-WP15D		
		BUF-COM-WP23D		
		[redacted]		
		[redacted]		
8-25-94		BUF-SUMP-WP1		WIPE OF SUMP
8-25-94		BUF-BLANK		FIELD BLANK.
"		BUF-COM-WP26		COMPRESSOR BUILDING
"		BUF-COM-WP27		FLOOR
"		BUF-COM-WP28		
"		BUF-COM-WP29		
"		BUF-COM-WP30		

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BURLINGTON ENVIRONMENTAL
A Philip Environmental Company

Chain-of Custody Record

3010 Greens Road
Houston, TX 77032

(713) 442-1794 Phone
(713) 442-1797 FAX

COC Serial No. D 1958

Project Name PCB LINE CLEANING
Project Number 11885 Phase . Task 3581 . 77
Samplers ROBERT WARNER
Laboratory Name ETS ANALYTICAL
Location ROANOKE, VIRGINIA

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Type of Analysis and Bottle: PCB's	Comments
BUF-CONT-WP1	8-25-94		WIPE	1	✓	
BUF-CONT-WP2	"		"	1	✓	
BUF-CONT-WP3	"		"	1	✓	
BUF-CONT-WP4	"		"	1	✓	
BUF-CONT-WP5	"		"	1	✓	
BUF-CONT-WP6	"		"	1	✓	
BUF-CONT-WP7	"		"	1	✓	
BUF-CONT-WP8	"		"	1	✓	
BUF-CONT-WP9	"		"	1	✓	
BUF-CONT-WP10	"		"	1	✓	
BUF-CONT-WP11	"		"	1	✓	

Relinquished by:

Signature	Date	Time
Robert Warner	8/26/94	0910

Received By:

Signature	Date	Time

Samples Iced: ☒ Yes ☐ No
Carrier:
Airbill No.

Preservatives (ONLY for Water Samples)
- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☐ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☐ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☒ Other (Specify)
- ☐ Other (Specify)

Shipping and Lab Notes: WIPE SAMPLES PRESERVED IN ICE WARE.

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179 4/94

BURLINGTON ENVIRONMENTAL
A Philip Environmental Company

Chain-of Custody Record

3010 Greens Road
Houston, TX 77032

(713) 442-1794 Phone
(713) 442-1797 FAX

COC Serial No. D 1959

Project Name PCB LINE CLEANING
Project Number 11865 Phase . Task 3581.77
Samplers ROBERT VARNUM
Laboratory Name ETS ANALYTICAL
Location LYNCHBURG, VIRGINIA

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Type of Analysis and Bottle: PCBs	Comments
BUF-COM-WP12	8-25-94		WIPE	1	✓	
BUF-COM-WP13	"		"	1	✓	
BUF-COM-WP14	"		"	1	✓	
BUF-COM-WP15	"		"	1	✓	
BUF-COM-WP16	"		"	1	✓	
BUF-COM-WP17	"		"	1	✓	
BUF-COM-WP18	"		"	1	✓	
BUF-COM-WP19	"		"	1	✓	
BUF-COM-WP20	"		"	1	✓	
BUF-COM-WP21	"		"	1	✓	
BUF-COM-WP22	"		"	1	✓	

Relinquished by:

Signature	Date	Time
[signature]	8/26/94	0910

Received By:

Signature	Date	Time

Samples Iced: ☑ Yes ☐ No

Carrier:

Airbill No.

Preservatives (ONLY for Water Samples)
- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☐ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☐ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☑ Other (Specify)
- ☐ Other (Specify)

Shipping and Lab Notes: WIPE SAMPLES PRESERVED IN HEXANE

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BURLINGTON ENVIRONMENTAL
A Philip Environmental Company

Chain-of Custody Record

3010 Greens Road
Houston, TX 77032

(713) 442-1794 Phone
(713) 442-1797 FAX

COC Serial No. D 1960

Project Name TCE LINE CLEANING

Project Number 11185 Phase . Task 3581 . 77

Samplers ROBERT VACANTI

Laboratory Name ETS ANALYTICAL

Location ROANOKE, VIRGINIA

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Type of Analysis and Bottle: TCE'S	Comments
FUF-COM-WP23	8-25-94		WIPE	1	✓	
FUF-COM-WP24	"		"	1	✓	
FUF-COM-WP25	"		"	1	✓	
FUF-COM-WP1D	"		"	1	✓	
FUF-COM-WP18D	"		"	1	✓	
FUF-COM-WP23D	"		"	1	✓	
FUF-SUMP-WP1	"		"	1	✓	
FUF-BLANK	"		"	1	✓	

Relinquished by:

Signature	Date	Time
[signature]	8/26/94	0710

Received By:

Signature	Date	Time

Samples Iced: ☑ Yes ☐ No

Preservatives (ONLY for Water Samples)

- ☐ Cyanide — Sodium hyroxide (NaOH)
- ☐ Volatile Organic Analysis — Hydrochloric acid (HCl)
- ☐ Metals — Nitric acid (HNO_3)
- ☐ TPH (418.1) — Sulfuric acid (H_2SO_4)
- ☑ Other (Specify) ICE
- ☐ Other (Specify)

Carrier:

Airbill No.

Shipping and Lab Notes: WIPE SAMPLES PRESERVED IN ICE CHEST.

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BURLINGTON ENVIRONMENTAL
A Philip Environmental Company

Chain-of Custody Record

3010 Greens Road
Houston, TX 77032

(713) 442-1794 Phone
(713) 442-1797 FAX

COC Serial No. D 1910

Project Name PCB LINE CLEANING
Project Number 11885 Phase . Task 3581 . 77
Samplers ROBERT VILLARREAL
Laboratory Name ETS ANALYTICAL
Location ROANOKE, VIRGINIA

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Type of Analysis and Bottle: PCBs	Comments
RIF-COM-WP26	8-25-94		WIPE	1	✓	
RIF-COM-WP27				1	✓	
RIF-COM-WP28				1	✓	
RIF-COM-WP29				1	✓	
RIF-COM-WP30				1	✓	

Relinquished by:

Signature	Date	Time
[signature]		

Received By:

Signature	Date	Time

Samples Iced: ☒ Yes ☐ No

Preservatives (ONLY for Water Samples)
- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☐ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☐ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☒ Other (Specify) _____
- ☐ Other (Specify) _____

Carrier: Airbill No.

Shipping and Lab Notes: WIPE SAMPLES PRESERVED IN ICE CHEST

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Burlington Environmental Mobile Decontamination Units

SAMPLE LOG

Page_____ of _____

Client: WILLIAMS NATURAL GAS

Station: BUFFALOE, OK.

Supervisor: ROBERT YARNUM

Date Sampled	Time	Unique Identification	Sample Result	Remarks
4-25-94		BUF-PC-WP1		SAMPLES FROM
		BUF-PC-WP2		DIP CHASE.
		BUF-PC-WP3		
		BUF-PC-WP4		
		BUF-PC-WP5		
		BUF-PC-WP6		

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BURLINGTON ENVIRONMENTAL
A Philip Environmental Company
3010 Greens Road
Houston, TX 77032
(713) 442-1794 Phone
(713) 442-1797 FAX

Chain-of Custody Record

COC Serial No. D 1941

Project Name: PCB LINE CLEANING
Project Number: 11085 Phase . Task 3581 . 77
Samplers: ROBERT VAUGHAN
Laboratory Name: ETS ANALYTICAL
Laboratory Location: ROANOKE, VIRGINIA

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	PCBS											Comments
BUF-PC-WP1	8-25-94		WIPE	1	✓											
BUF-PC-WP2				1	✓											
BUF-PC-WP3				1	✓											
BUF-PC-WP4				1	✓											
BUF-PC-WP5				1	✓											
BUF-PC-WP6				1	✓											

Relinquished by: / **Received By:**

Signature	Date	Time	Signature	Date	Time
[signature]	8/26/94	0910			

Samples Iced: ☑ Yes ☐ No

Preservatives (ONLY for Water Samples)
- ☐ Cyanide .... Sodium hyroxide (NaOH)
- ☐ Volatile Organic Analysis .... Hydrochloric acid (HCl)
- ☐ Metals .... Nitric acid (HNO_3)
- ☐ TPH (418.1) .... Sulfuric acid (H_2SO_4)
- ☑ Other (Specify)
- ☐ Other (Specify)

Carrier: Airbill No.

Shipping and Lab Notes: WIPE SAMPLES PRESERVED IN HEXANE.

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Burlington Environmental Mobile Decontamination Units

SAMPLE LOG

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Page_____ of _____

Client: WILLIAMS NATURAL GAS.

Station: BUFFALO

Supervisor: ROBERT VARNUM

Date Sampled	Time	Unique Identification	Sample Result	Remarks
3-25-94		BUF - PC - DRAIN1		DRIP DRAIN IN PIPECHASE
		BUF - CBW - WP1		COMPRESSOR BASEMENT
		BUF - CBW - WP2		WALL
		BUF - CBW - WP3	APROX 2' DOWN	
		BUF - CBW - WP4	UNDER STEEL	
		BUF - CBW - WP5	GRATE INC.	
		BUF - CBW - WP6		
		BUF - ARH - WP1		3" HEADER OF AIR RECEIVE
				WEST SIDE.

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BURLINGTON ENVIRONMENTAL
A Philip Environmental Company

Chain-of Custody Record

3010 Greens Road
Houston, TX 77032

(713) 442-1794 Phone
(713) 442-1797 FAX

COC Serial No. D 1943

Project Name PCB LINE CLEANING
Project Number 11885 Phase . Task 3581 . 77
Samplers ROBERT VARNUM
Laboratory Name ETS ANALYTICAL
Location ROANOKE, VIRGINIA

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Type of Analysis and Bottle: PCB's												Comments
BVF - PC - DRAIN	8-25-94		WIPE	1	✓												
BVF - CBN - WP1	"		"	1	✓												
BVF - CBN - WP2	"		"	1	✓												
BVF - CBN - WP3	"		"	1	✓												
BVF - CBN - WP4	"		"	1	✓												
BVF - CBN - WP5	"		"	1	✓												
BVF - CBN - WP6	"		"	1	✓												
BVF - AFN - WP1	"		"	1	✓												

Relinquished by:

Signature	Date	Time
[signature]	8-26-94	0910

Received By:

Signature	Date	Time

Samples Iced: ☒ Yes ☐ No

Preservatives (ONLY for Water Samples)
- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☐ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☐ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☒ Other (Specify) _____
- ☐ Other (Specify) _____

Carrier: Airbill No.

Shipping and Lab Notes: WIPE SAMPLES PRESERVED IN HEXANE

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APPENDIX B

ETS Analytical Results

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ETS Analytical Services, Inc.

Proudly serving industry and government since 1973. A USEPA Contract Laboratory

A subsidiary of ETS International, Inc.

September 23, 1994

Mr. Douglas E. Birkbeck
Williams Natural Gas
One Williams Center
Mail Drop 31-1
Tulsa, Oklahoma 74101

Dear Mr. Birkbeck:

Enclosed please find the analytical data for forty eight (48) wipe samples which were analyzed for PCB's by EPA Method 8080 and are being reported in CLP format modified for reporting of PCB's only. These samples are wipe samples which were analyzed under Williams Gas CSC.VI-Contract (BUF). The chains of custody and sample login forms are attached.

As previously stated, the CLP reporting format (forms) required some modification for reporting of PCB only data, as specified below:

Form 1:	Only Aroclors listed (single component pesticides deleted).
Form 2:	No modifications required.
Form 3:	Modified to specify Aroclors as the spike "compounds". A similar form was created to report lab duplicate data (not required by CLP or Method 8080, but specified in the ETS Quality Assurance Plan).
Form 4:	No modifications required.
Form 5:	Not applicable to GC analyses.
Form 6:	Modified to accommodate reporting of five-point calibration data for Aroclors only.
Form 7:	Modified to accommodate reporting of continuing calibration data for Aroclors only. A similar form was created to accommodate reporting of initial calibration verification data (not required by CLP or Method 8080, but specified in the ETS Quality Assurance Plan). The Form 7 (continuing calibration) format has been expanded to include the run ID in order to facilitate more streamlined data validation.
Form 8:	No modifications required. Retention time windows of +/-0.1 min for TCMX and +/- 0.2 min for DCB were adopted by the laboratory, since retention time windows are not specified by Method 8080.

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Comments concerning the specific analytical data contained in this report are presented in the following paragraphs:

Lab duplicates were conducted in accordance with the ETS QA plan. Blank spikes were also performed to comply with the statement of work for this project. Sample ID terminology has been defined in previous reports.

No unusual problems were encountered in the analysis of these samples.

The diskette was prepared using Lotus 123 (rev 2.4), in the format used previously. Data for three stations are presented on a single diskette, but with separate files for each of the stations.

If there are any questions regarding these data, please feel free to contact me at any time.

Sincerely yours,

Richard R. Whitney, Ph.D.
Organics Department Manager

cc: Steve Thornton
Burlington Environmental, Inc.
Huston, TX

000081

WILLIAMS NATURAL GAS: CUSTOMIZED REPORT FOR PCB DATA

LOCATION: BUF, PCB Line Cleaning
REPORT DATE: 9/23/94
SDG: 163231
LABORATORY: ETS ANALYTICAL SERVICES

				Aroclor										ANALYZED	
WMS GAS ID	LAB ID	MATRIX	DESCRIPTION	1016	1221	1232	1242	1248	1254	1260	UNITS	DET LIM	ANALYBY	DATE	TIME
BUF-COM-WP1	163231	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/09/94	1034
BUF-COM-WP2	163232	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/09/94	1126
BUF-COM-WP3	163233	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/09/94	1152
BUF-COM-WP4	163234	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/09/94	1218
BUF-COM-WP5	163235	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/09/94	1244
BUF-COM-WP6	163236	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/09/94	1310
BUF-COM-WP7	163237	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.8	1.0 U	ug Total	1.0	TJM	09/09/94	1428
BUF-COM-WP8	163238	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.0	1.0 U	ug Total	1.0	TJM	09/09/94	1454
BUF-COM-WP9	163239	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/09/94	1521
BUF-COM-WP10	163240	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/09/94	1547
BUF-COM-WP11	163241	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/09/94	1617
BUF-COM-WP12	163242	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.8	1.0 U	ug Total	1.0	TJM	09/09/94	1709
BUF-COM-WP13	163243	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/09/94	1735
BUF-COM-WP14	163244	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/09/94	1801
BUF-COM-WP15	163245	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/09/94	1827
BUF-COM-WP16	163246	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/09/94	1945
BUF-COM-WP17	163247	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.3	1.0 U	ug Total	1.0	TJM	09/09/94	2011
BUF-COM-WP18	163248	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/09/94	2037
BUF-COM-WP19	163249	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.4	1.0 U	ug Total	1.0	TJM	09/09/94	2104
BUF-COM-WP20	163250	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/09/94	2130
BUF-COM-WP21	163251	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.4	1.0 U	ug Total	1.0	TJM	09/09/94	2314
BUF-COM-WP22	163252	WIPE	BUF, 3581.77, D195	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	36	1.0 U	ug Total	1.0	TJM	09/10/94	0058
BUF-COM-WP23	163253	WIPE	BUF, 3581.77, D196	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/10/94	0124
BUF-COM-WP24	163254	WIPE	BUF, 3581.77, D196	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/10/94	0150
BUF-COM-WP25	163255	WIPE	BUF, 3581.77, D196	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/10/94	0217
BUF-COM-WP1D	163256	WIPE	BUF, 3581.77, D196	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/10/94	0243
BUF-COM-WP13D	163257	WIPE	BUF, 3581.77, D196	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/10/94	0309
BUF-COM-WP23D	163258	WIPE	BUF, 3581.77, D196	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/10/94	0335
BUF-BLANK	163259	WIPE	BUF, 3581.77, D196	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/10/94	0401
BUF-COM-WP26	163260	WIPE	BUF, 3581.77, D191	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/10/94	0427
BUF-COM-WP27	163261	WIPE	BUF, 3581.77, D191	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.8	1.0 U	ug Total	1.0	TJM	09/10/94	0453
BUF-COM-WP28	163262	WIPE	BUF, 3581.77, D191	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/13/94	1506
BUF-COM-WP29	163263	WIPE	BUF, 3581.77, D191	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/10/94	0704
BUF-COM-WP30	163264	WIPE	BUF, 3581.77, D191	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/10/94	0730
BUF-PC-WP1	163265	WIPE	BUF, 3581.77, D194	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	73	1.0 U	ug Total	1.0	TJM	09/10/94	0756
BUF-PC-WP2	163266	WIPE	BUF, 3581.77, D194	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4300	1.0 U	ug Total	1.0	TJM	09/13/94	1027
BUF-PC-WP3	163267	WIPE	BUF, 3581.77, D194	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	900	1.0 U	ug Total	1.0	TJM	09/13/94	1053
BUF-PC-WP4	163268	WIPE	BUF, 3581.77, D194	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2900	1.0 U	ug Total	1.0	TJM	09/13/94	1646
BUF-PC-WP5	163269	WIPE	BUF, 3581.77, D194	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	650	1.0 U	ug Total	1.0	TJM	09/13/94	1711
BUF-PC-WP6	163270	WIPE	BUF, 3581.77, D194	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	110	1.0 U	ug Total	1.0	TJM	09/10/94	1006

WILLIAMS NATURAL GAS: CUSTOMIZED REPORT FOR PCB DATA

LOCATION: BUF, PCB Line Cleaning
REPORT DATE: 9/23/94
SDG: 163231
LABORATORY: ETS ANALYTICAL SERVICES

				Aroclor										ANALYZED	
WMS GAS ID	LAB ID	MATRIX	DESCRIPTION	1016	1221	1232	1242	1248	1254	1260	UNITS	DET LIM	ANALYBY	DATE	TIME
BUF-PC-DRAW	163271	WIPE	BUF, 3581.77, D194	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1100	1.0 U	ug Total	1.0	TJM	09/13/94	1736
BUF-CBW-WP1	163272	WIPE	BUF, 3581.77, D194	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/10/94	1217
BUF-CBW-WP2	163273	WIPE	BUF, 3581.77, D194	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/10/94	1243
BUF-CBW-WP3	163274	WIPE	BUF, 3581.77, D194	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/10/94	1309
BUF-CBW-WP4	163275	WIPE	BUF, 3581.77, D194	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/10/94	1335
BUF-CBW-WP5	163276	WIPE	BUF, 3581.77, D194	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	ug Total	1.0	TJM	09/10/94	1402
BUF-CBW-WP6	163277	WIPE	BUF, 3581.77, D194	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1	1.0 U	ug Total	1.0	TJM	09/10/94	1427
BUF-ARH-WP1	163278	WIPE	BUF, 3581.77, D194	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	21	1.0 U	ug Total	1.0	TJM	09/10/94	1453

80000

APPENDIX C

Manifests and Certificates of Disposal

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HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

CEXS

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: OKP411014107 | Manifest Document No.: 0000/ | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
WILLIAMS NATURAL GAS CO
.25 N ON 183 OF HWY 11
HARPER COUNTY OK 73717

4. Generator's Phone (918) 588-3383

A. State Manifest Document Number: CWMA 771896

B. State Generator's ID: IdM

5. Transporter 1 Company Name: JB Hunt Special Commodities | 6. US EPA ID Number: ARD981998551

C. State Transporter's ID

D. Transporter's Phone: 8 - 695-5632

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, Alabama 35459

10. US EPA ID Number: ALD000622464

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYLS, 9, UN2315, III Disposal Approval # 081795-0019 CWM Profile # BM1863	001	dm	6.6	Kg	PCB1
b. Disposal Approval # CWM Profile #					
c. Disposal Approval # CWM Profile #					
d. Disposal Approval # CWM Profile #					

J. Additional Descriptions for Materials Listed Above
a. BM1863 PCB CONCENTRATION >50 PPM   SC# 1
OUT OF SERVICE DATE 8/25/94
WEIGHT IN KILOGRAMS

State of Generation OKLAHOMA

K. Handling Codes for Wastes Listed Above
a. L c.
b. d.

15. Special Handling Instructions and Additional Information
DISCREPANCIES CONTACT DOUG BERKBECK AT 918/855-3383. SEND CERTIFICATE OF DISPOSAL TO ADDRESS ABOVE ATTN: DOUG BERKBECK.

Purchase Order #

Work Order # 162017

EMERGENCY CONTACT: (800)765-8713

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: DOUGLAS E. BIRKBECK For WNG | Signature: Douglas E. Birkbeck | Month Day Year: 1/9/94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Bobby W. Masten | Signature: Bobby W. Masten | Month Day Year: 1/10/94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

000085

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: WELDON | Signature | Month Day Year: 1/10/94

000085

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

GENERATOR NO. 2 (Must Accompany Shipment)

Chemical Waste Management, Inc.

Emelle Facility
P.O. Box 55
Emelle, Alabama 35459-0055
205/652-9721

FEDERAL EPA ID NUMBER: ALD000622464
MANIFEST DOCUMENT NUMBER: 00001

WILLIAMS NATURAL GAS CO
.25 N ON 183 OF HWY 11
HARPER COUNTY, OK 73717

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. has received PCB material from WILLIAMS NATURAL GAS CO described on Alabama Hazardous Waste Manifest number CWMA 771896. Chemical Waste Management, Inc. hereby certifies that the above described material {excluding PCB liquids, if applicable} was landfilled on the 19th day of October , 1994, in compliance with State and Federal Regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations {18U.S.C. 1001 and 15U.S.C 2615}, I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section{s} of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Dorothy Oliver/DL

Dorothy Oliver, Recordkeeping & Reporting Supervisor

DATE: 10/26/94

PROFILE	QUANT.	DESCRIPTION
BM1863	1	DRUM

000086

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